

**REMARKS**

In response to the Office Action mailed May 18, 2004, Applicants respectfully request reconsideration. Claims 12-23 and 86-124 have been examined.

**Rejections Under 35 U.S.C. §103**

Claims 12-23 and 86-124 are rejected under 35 U.S.C. §103(a) as being unpatentable over Liang (U.S. Patent No. 5,719,948) in view of Shaw (U.S. Patent No. 3,663,813), Falls (U.S. Patent No. 4,567,370) and Stenzel et al. (U.S. Patent No. 4,146,792). This rejection is respectfully traversed.

The present rejection is substantially identical to the previous one; however, it has been clarified that the rejection is over Liang in view of the Shaw, Falls and now Stenzel. Previously, the Office Action suggested that the rejection was over Liang alone, but nevertheless appeared to rely on the features of Falls and Shaw and suggested such features can be combined with Liang to render the claimed invention obvious. To address this, the present Office Action more positively recites that the rejection is based on a combination of Falls and Shaw and now also in view of Stenzel.

Even though the present Office Action clarifies that the rejection is in view of a combination of references, the stringent test required under a 35 U.S.C. §103 analysis must still be applied. That is, it must be shown that it would have been obvious to one of skill in the art to modify the references in the manner suggested in order to render the Applicants' claimed invention obvious. It is respectfully submitted that the Office Action again fails to support a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness when more than one reference is relied upon, it is necessary to show *why* one of skill in the art would have been motivated to make the substitution or modification. That is, there must be some reason, suggestion, incentive or motivation in the prior art as a whole for the person skilled in the art to have modified the references. It is insufficient to simply show that the prior art contains the assorted features of the claimed invention – it is impermissible to use the claimed invention as an instruction manual to piece together the teachings of the prior art so as to render the claimed invention obvious.

To satisfy this burden, some objective teaching in the prior art or within the knowledge of one of skill in the art must be presented to show that the skilled person would have been so motivated to combine or modify the references in the manner suggested to reach the claimed invention. For the former, the Office Action should point to the sections in the prior art relied upon to establish *why* one of skill in the art would have been so incentivized. For the latter, again the Office Action should specifically set forth facts supporting the knowledge of one of skill in the art relied upon to establish the requisite motivation as to *why* one of skill in the art would have been so incentivized. The factual inquiry whether to combine the references must be based on objective evidence in the record, not merely based on alleged knowledge or state of the art. If the Examiner is relying on personal knowledge, the Examiner should file an affidavit establishing those facts pursuant to MPEP §2144.03.

The mere fact that the prior art could have been combined in the manner suggested does not make the modification obvious – simply, there must be a reason or a desirability articulated in the prior art or within the knowledge of one of skill to do so. Motivation to combine requires desirability, not merely a trade-off between several options. Moreover, the proposed modification must not frustrate the intended purpose of the modified reference. Finally, even if there is motivation to combine or modify the references as suggested, all of the claimed elements must be shown in the modified reference to establish a *prima facie* case.

Applying the forgoing principles, the Office Action fails to set forth a *prima facie* case of obviousness.

***Present Rejection of Independent Claim 12 and the Claims Dependent Thereon***

Regarding claim 12, the Office Action states on page 4 that the primary reference relied upon, Liang, “does not teach that the ‘processor processes the data independent of the pattern of the mark, the processor comparing the data that is independent of the pattern of the mark to a standard and rendering an authentication signal based on the comparison.’”. The Office Action continues by examining the teachings of the other art relied upon, namely Falls, Shaw and Stenzel et al. With particular reference to Claim 12 of the present application, the Office Action states, “[i]n all three the processing is not

based upon the shape of the mark; Shaw is explicit: ‘the shape of the symbol marking area is immaterial’ (column 1, line 24) and ‘[i]t is not necessary that the symbol have a particular shape, such as a number or letter’ (column 1, lines 25-26), although Shaw also discloses that the marks may have a particular shape: ‘... the coding component is also useful with ... shaped symbols’ (column 1, lines 27-28)’.

The Office Action concludes, on Page 5, that “[i]t would have been obvious to include this known coding method of product authentication with the system of Liang. This inclusion is not only known, but is compatible with the marks and detection system taught by Liang”.

As an initial matter, the sections of Shaw quoted in the Office Action are found in the Background of Shaw and are relevant to the prior art Freeman and Halverson patent, not necessarily to Shaw. Nevertheless, even assuming the quoted sections are directed to the Shaw device, as discussed above, allegedly known components and potential compatibility is not, by itself, sufficient to establish obviousness, as it is impermissible to use the claimed invention as an instruction manual to piece together the teachings of the prior art so as to render the claimed invention obvious. There must be a reason to combine these components. It is respectfully submitted that regarding this statement, the Office Action does not state *why* one would have been motivated to make the modification.

The Office Action further concludes [i]t would have been obvious to include in the system of Liang because it is {sic} would provide an additional level of security by adding an additional test of authenticity, the coded fluorescence, in a manner already largely provided for by the system of Liang and, as shown by the other references, otherwise known in the art.” Thus, in an attempt to answer the question *why* one of skill would have been motivated to modify Liang with the teachings of the other cited references, the Office Action states that an additional level of security would be provided by adding an additional test of authenticity. However, the Office Action falls short in that it does not explain where *in the prior art or in knowledge of one of skill* is this motivation (providing an additional level of security). Simply, the answer to the question *why* it would have been desirable to do so with the system of Liang, must be *based on the*

*prior art or on knowledge of one of skill.* The Office Action has not pointed to any such teaching.

Further, the present Office Action states, “[n]othing is {sic} the Liang reference suggests, or would be taken as suggesting, that the use of the combination of a plurality of fluorescent materials as an authenticating means would cease to work merely because the shape of the marks is known and is alone being used for authenticating. Also, Shaw mentions that while ‘the shape of the symbol marking area is immaterial’, ‘the component is also useful with … shaped symbols’ (column 1, lines 23-30), which teaches that the use of such fluorescent coding with shaped symbols is possible and useful.” Again, the sections of Shaw quoted in the Office Action are found in the Background of Shaw and not necessarily relevant to Shaw. Nevertheless, even assuming the quoted sections are directed to the Shaw, the statement in the Office Action that the fluorescent materials would or would not cease to work in Liang, applies an incorrect analysis under 35 U.S.C. §103. The issue is not whether the device would still work with the modification, but rather whether one of skill would have been motivated to provide a system that relied on shape independence. It is irrelevant whether Liang *could be* modified (that it may still work with shaped and unshaped symbols). The Office Action must show *why* one *would* modify Liang to work with unshaped symbols. That is, the Office Action must demonstrate what it is about the prior art that would *so* motivate one of skill to take a presumptively working piece of prior art (Liang), ignore its express teachings (the use of shaped symbols) and add to it the teachings of the other references (using unshaped symbols).

In summary, while the individual elements may be found in the prior art, while they may be compatible, and while these individual elements could be pieced together, the analysis under 35 U.S.C. §103 requires more, as known compatibility, a finding of individual elements in the prior art, trade-offs between providing one level of authenticity vs. an additional level of authenticity is simply *not the test*. Rather, it must be shown that piecing these individual pieces together is *desirable* and that the reason for such desirability must be within the record, not simply fabricated.

Additionally, it is respectfully submitted that, based on the teachings of the prior art, one would not have been motivated to modify Liang to authenticate articles without

regard to the shape of the mark. As stated at in the “Objects and Advantages of the Invention” at column 3, Liang makes clear that one object of the invention to provide an “improved authentication system which can detect and recognize complex indicia such as graphic images and alphanumeric characters” and another object is “to combine the use of substances which fluoresce under UV illumination, detectors capable of detecting fluorescent radiation , and image or character recognition techniques to enable the creation and authentication of articles with improved security”. One of skill in the art would not have been motivated to modify Liang to authenticate articles independent of shape because the feature of shape dependence is the very heart of the Liang system.

The Office Action on page 8, suggests that the previous argument is not on point because the rejection is based on a combination of references, not on Liang alone. Even though the present Office Action clarifies that the rejection is not based on Liang alone, the prior response assumed as much and presented an argument as if the Office Action were relying on the combination of Liang with Falls and Shaw. The Applicants merely pointed out (and continues to point out) that while the individual components may be known in the art, this alone is insufficient to establish a *prima facie* case of obviousness and that the Office Action must show the desirability to combine the individual components.

Continuing on page 8, the Office Action states that a reference does not “teach away” simply because it is not applicable under 35 U.S.C. §102. The Applicant appreciates that the rejection is not under 35 U.S.C. §102, and was merely pointing to a reason *why* one of skill would *not* have been motivated to make the combination, namely that Liang expressly relies on a particular methodology for authentication and that in doing so, teaches away from other methodologies.

Accordingly, it is respectfully requested that the rejection of claim 12, and its dependent claims, be withdrawn, as a *prima facie* case of obvious has not been provided.

Even assuming that Liang can be combined with Falls, Shaw and Stenzel, the resulting combination would not render Claim 12 unpatentable. In this regard, relying on the statement in the Office Action that modifying Liang would result in an “additional test of authenticity”, combining the references would result in a modified Liang device that not only authenticates based on shape recognition, but also on shape independence.

That is, the resulting system would not be one kind of authentication over another (not a mere substitution) but, to use the words of the Office Action, an “additional” level of authentication. Claim 12, on the other hand, requires that the authentication be independent of the pattern of the mark, that is, to the exclusion of the shape, not as in the combined teachings of the prior art.

Accordingly, for this additional reason, it is respectfully requested that the rejection of claim 12, and its dependent claims, be withdrawn.

***Present Rejection of Independent Claim 90 and the Claims Dependent Thereon***

The Office Action does not clearly articulate a separate reason for rejecting claim 90. It is possible from page 5, lines 2-6, that the rejection is based on Liang in view of Stenzel presumably because Stenzel allegedly teaches, as stated in the Office Action, fluorescent markers that may comprise a mixture of several substances producing fluorescence in a narrow band and that the mixture ratio may serve as an additional security. As with the rejection of claim 12, the Office Action appears to rely on the statement that “[i]t would have been obvious to include in the system of Liang because it is {sic} would provide an additional level of security by adding an additional test of authenticity, the coded fluorescence, in a manner already largely provided for by the system of Liang and, as shown by the other references, otherwise known in the art.”

As discussed above, allegedly known components and potential compatibility is not, by itself, sufficient to establish obviousness, as it is impermissible to use the claimed invention as an instruction manual to piece together the teachings of the prior art so as to render the claimed invention obvious. There must be a reason to combine these components. It is respectfully submitted that regarding this statement, the Office Action does not state *why* one would have been motivated to make the modification.

Further, the suggested modification to Liang begs the question that Liang is somehow deficient in the methodology used for authentication. Nowhere in Liang, the other references, or in the prior art or knowledge of one of skill is it suggested that it is somehow advantageous to take the perfectly acceptable prior art methodology of Liang and render it more complex by the addition of further processing to obtain an additional level of security. There is nothing inadequate with the Liang system that would have

motivated one to modify it in the manner suggested. Just because an additional level of security could be added to Liang is insufficient.

Simply, it is respectfully submitted that it would not have been *desirable* (as it is required to show under a proper 35 U.S.C. §103 analysis) to modify Liang in the manner suggested because the Liang system is adequate unto itself. Accordingly, it is respectfully requested that the rejection of claim 90, and its dependent claims, be withdrawn, as a *prima facie* case of obvious has not been provided.

***Present Rejection of Independent Claim 108 and the Claims Dependent Thereon***

Claim 108 is directed to a system comprising a detection device comprising a snapshot display and an invisible mark that is viewable **only** through the snapshot display. Again, it is unclear from the Office Action how the claim is rendered obvious because the Office Action does not separately address the claim or the combination that allegedly renders the claim obvious.

Liang requires UV light to illuminate an invisible image. Once the image is excited, a human can read the image. As clearly pointed out in both the previous Office Action and the present Office Action (see page 4), Liang discusses human observation where the characters are made readable “once they are made visible” by UV light (Liang abstract) and provides a “first-order authentication by a human observer”, as recognized by the in the Office Action.

In the previous response, the Applicants stated that one of skill in the art would not have been motivated to modify Liang such that the image was viewable *only* in the snap shot mode, because doing so would frustrate the purpose of Liang, namely human readability.

The Office Action responds by asserting that the other references teach the use of invisible marks and that Liang teaches displaying the mark. The inference being that it would have been obvious to then display the initially invisible mark only through the Liang device, although the Office Action does not explicitly states this. This argument fails to address Liang’s specific teaching of allowing a human observer to read the mark once it is made fluorescent. Again, while the individual elements may be in the prior art,

the analysis must focus on why one would have been motivated to modify Liang. Here, it is respectfully submitted that one would not have been so motivated because one of the features of Liang would have then been frustrated. (See MPEP §2143.01, “If the proposed modification would render the prior art invention unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” “If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.”) The analysis cannot simply rely on picking and choosing among the various disclosures of the prior art and piecing them together in a manner to render the claimed invention obvious. In this case, modifying Liang in the manner suggested would frustrate Liang’s purpose by preventing the mark from being human readable, such that claim 108, which requires that the mark be visible (and therefore readable) only through the snap shot mode, is not rendered unpatentable.

According Applicants respectfully request that the rejection of claim 108, and its dependent claims, be withdrawn.

**CONCLUSION**

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicants' attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,

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